Audrey W. Lee

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Education

Stanford University **Expected Graduation: Jun. 2024**

Master of Science in Electrical Engineering

- GPA in Jan. 2023

Olin College of Engineering **Aug. 2018 – May 2022**

Bachelor of Science in Electrical and Computer Engineering

- GPA: 3.9
- Recipient of 4-year, 50% Olin Merit Scholarship

Experience

Olin Satellite + Spectrum Technology & Policy Group **Oct. 2020 – May 2022**

Satellite Communications Undergraduate Research, Olin College of Engineering, Needham, MA

- Designed EPFD measurement tool in MATLAB to quantify interference from NGSO satellite communications systems into geostationary systems
- Lead a team to research algorithms for mitigating interference into passive science users and developed MATLAB tool for quantifying interference into Radio Astronomy Services (RAS) systems

Olin College of Engineering Advanced Algorithms Teacher **Jan. 2022 – May 2022**

Student-Teacher, Olin College of Engineering, Needham, MA

- Taught the student-led "Advanced Algorithms" course at my college
- Created lesson plans, lectures, and assignments on topics such as network flows, integer programming, and approximation algorithms

Human Interactive Robotics Laboratory **Sept. 2018 – Dec. 2021**

Leader; Robot Perception Undergraduate Research, Olin College of Engineering, Needham, MA

- Lead a team to program robotic arms to interact with the physical world
- Lead a project geared towards object detection and location in a 3D space that involves Reinforcement Learning with object localization

Olin College of Engineering Course Assistant **Aug. 2020 – Dec. 2021**

Olin College of Engineering, Needham, MA

- Data Structures & Algorithms: Assisted with grading and teaching different sorting algorithms, data structures, path-finding algorithms, proofs, and dynamic programming
- Computer Architecture: Assisted with grading and teaching how computers interface with external real-world IO; how to write good simulation and testbenches with (System) Verilog and Xilinx tools
- Machine Learning: Assisted with grading and teaching a variety of machine learning techniques from both a mathematical and algorithmic perspective.

Projects

Hardware Radio Simulation **Oct. 2021 - Dec 2021**

Implemented signal generation, transmitter, and receiver circuits in LTspice to simulate a radio

Castle of Air **Oct. 2019 - Dec. 2019**

Using an Arduino, created, designed, and prototyped a PCB that filters and amplifies sound waves. Using Arduino's IDE, performed Fourier Transform on the sound waves to extract frequencies and their respective amplitudes.

Additional Information

Programming Languages: Python; C++/C#; Java; Verilog; MIPS; HTML

Software: SolidWorks; Autodesk Inventor/Revit; Unity; MATLAB; Mathematica; Arduino; LTspice; KiCAD

Awards: Clare Boothe Luce Research Award (2021-2022); Massachusetts Space Grant (2021-2022)